

LISTING OF CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

1. **(original)** A method of modifying development of a plant comprising
transforming a plant cell with a nucleic acid encoding a plant cyclin-dependent
kinase inhibitor polypeptide to produce a transformed plant cell; and,
growing the transformed plant cell or progeny of the transformed plant cell to
produce a transformed plant under conditions wherein the plant cyclin-dependent kinase
inhibitor polypeptide is expressed in a proliferative tissue of the transformed plant to inhibit
development of a differentiated tissue in the plant.
2. **(currently amended)** The method of claim 1, wherein the nucleic acid encoding
the cyclin-dependent kinase inhibitor is homologous to ICK1, ~~ICK2, ICN2, ICN6 or ICN7.~~
3. **(currently amended)** The method of claim 1, wherein the nucleic acid encoding
the cyclin-dependent kinase inhibitor is ~~selected from a group consisting of ICK1, ICK2, ICN2,~~
~~ICN6 and ICN7.~~
4. **(currently amended)** The method of claim 1, wherein the cyclin-dependent
kinase inhibitor polypeptide is at least 70% identical, when optimally aligned, to ICK1, ~~ICK2,~~
~~ICN2, ICN6 or ICN7.~~
5. **(currently amended)** The method of claim 1, wherein the cyclin-dependent
kinase inhibitor polypeptide is ~~selected from a group consisting of ICK1, ICK2, ICN2, ICN6 and~~
~~ICN7.~~
6. **(original)** The method of claim 1, wherein the plant is a member of the *Cruciferae*
family.

7. **(original)** The method of claim 1, wherein the plant is a member of the *Brassica* genus.
8. **(original)** The method of claim 1, wherein the nucleic acid encoding the cyclin-dependent kinase inhibitor polypeptide is operably linked to a constitutive promoter.
9. **(original)** The method of claim 1, wherein the nucleic acid encoding the cyclin-dependent kinase inhibitor polypeptide is operably linked to a tissue-specific promoter.
10. **(cancelled)**.
11. **(original)** The method of claim 9, wherein the tissue-specific promoter is the AP3 promoter.
12. **(original)** The method of claim 9, wherein the tissue-specific promoter mediates expression of the nucleic acid encoding the cyclin-dependent kinase inhibitor polypeptide in petal or stamen primordia.
13. **(currently amended)** The method of claim 1 wherein modifying the development of the plant ~~the tissue in the plant is modified so that~~ makes the plant is male sterile.
14. **(original)** The method of claim 1 wherein the development of the tissue in the plant is modified so that petals on the transformed plant are altered or absent.
15. **(currently amended)** A transgenic plant comprising an expressible heterologous nucleic acid encoding a cyclin-dependent kinase inhibitor polypeptide capable of inhibiting a cyclin-dependent kinase, ~~wherein the heterologous nucleic acid is introduced into the transgenic plant, or an ancestor of the transgenic plant by the method of claim 1.~~
16. **(cancelled)**

17. **(cancelled)**

18. **(original)** A transgenic plant having a recombinant genome comprising a heterologous nucleic acid encoding a cyclin-dependent kinase inhibitor that is expressed in a proliferative tissue of the transformed plant to inhibit development of a differentiated tissue in the plant.

19. **(cancelled)**

20. **(currently amended)** A transgenic plant tissue ~~derived~~obtained from the transgenic plant of claim 18.

21. **(original)** The plant tissue of claim 20 wherein the tissue is selected from the group consisting of a seed and a flower.

22. **(original)** A method of growing the transgenic plant of claim 18, comprising growing the plant under conditions so that the cyclin-dependent kinase inhibitor polypeptide is expressed in a proliferative tissue of the transformed plant to inhibit development of a differentiated tissue in the plant.

23. through 26. **(cancelled)**

27. **(original)** A method of modifying development of a plant comprising transforming a plant cell with a nucleic acid encoding a plant cyclin-dependent kinase inhibitor polypeptide to produce a transformed plant cell; and, growing the transformed plant cell or progeny of the transformed plant cell to produce a transformed plant under conditions wherein the plant cyclin-dependent kinase inhibitor polypeptide is expressed in a proliferative tissue of the transformed plant to change the ploidy of a differentiated tissue in the plant.

28. **(new)** The method of claim 1, wherein the nucleic acid encoding the cyclin-dependent kinase inhibitor comprises:

a nucleic acid sequence as set forth in SEQ ID NO: 1;
a nucleic acid sequence as set forth in SEQ ID NO: 3; or
a nucleic acid sequence having at least 95% sequence identity with a nucleic acid sequence set forth in SEQ ID NO: 1 or SEQ ID NO: 3.

29. **(new)** The method of claim 1, wherein the nucleic acid encoding the cyclin-dependent kinase inhibitor comprises a nucleic acid sequence as set forth in SEQ ID NO: 1 or 3.

30. **(new)** A method of modifying floral development of a plant, comprising
transforming a plant cell with a nucleic acid encoding an *Arabidopsis* cyclin-dependent kinase inhibitor polypeptide to produce a transformed plant cell; and
growing the transformed plant cell or progeny of the transformed plant cell to produce a transformed plant,
wherein the plant cyclin-dependent kinase inhibitor polypeptide is expressed in petal or stamen primordia of the transformed plant to inhibit floral development.

31. **(new)** The method of claim 30, wherein the *Arabidopsis* cyclin-dependent kinase inhibitor polypeptide is encoded by a nucleic acid comprising:
a nucleic acid sequence as set forth in SEQ ID NO: 1;
a nucleic acid sequence as set forth in SEQ ID NO: 3; or
a nucleic acid sequence having at least 95% sequence identity with a nucleic acid sequence set forth in SEQ ID NO: 1 or SEQ ID NO: 3.

32. **(new)** A method of modifying development of a plant, comprising:
transforming a plant cell with a nucleic acid encoding an *Arabidopsis* cyclin-dependent kinase inhibitor polypeptide to produce a transformed plant cell; and
growing the transformed plant cell or progeny of the transformed plant cell to produce a transformed plant,
wherein expression of the plant cyclin-dependent kinase inhibitor polypeptide decreases ploidy of a differentiated tissue in the plant.

33. (new) The method of claim 32, wherein the *Arabidopsis* cyclin-dependent kinase inhibitor polypeptide is encoded by a nucleic acid comprising:

a nucleic acid sequence as set forth in SEQ ID NO: 1;

a nucleic acid sequence as set forth in SEQ ID NO: 3; or

a nucleic acid sequence having at least 95% sequence identity with a nucleic acid sequence set forth in SEQ ID NO: 1 or SEQ ID NO: 3.